

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

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In the Matter of )  
 )  
The 4.9 GHz Band Transferred from ) WT Docket No. 00-32  
Federal Government Use )

To the Commission:

COMMENTS OF APCO

The Association of Public-Safety Communications Officials-International, Inc. ("APCO"), through its undersigned counsel, hereby submits these Comments in response to the Commission's Notice of Proposed Rulemaking, FCC 00-63 (released February 29, 2000), in the above-captioned proceeding.<sup>1</sup>

APCO is the nation's oldest and largest public safety communications organization and frequency coordinator. Most of its over 14,000 members are involved in the management and operation of state and local government communications systems used by police, fire, emergency medical, forestry conservation, highway maintenance, disaster relief, and other public safety agencies.

BACKGROUND

In its NPRM, the Commission proposes to allocate and establish licensing and service rules for the 4940-4990 MHz (4.9 GHz) band that has been transferred from Federal Government use to private sector use as substitute spectrum for the 4635-4685 MHz band which was

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1. 65 Fed. Reg. 14230 (March 16, 2000) ("NPRM").

reclaimed by the Federal Government. The Commission proposes to use spectrum auctions to license the 4.9 GHz band under Part 27 for any fixed, land mobile and maritime mobile services on a co-primary basis.<sup>2</sup>

The Commission specifically declines to allocate the 4.9 GHz band or any portion of the band for public safety use, though it seeks comment on this tentative decision. APCO, as a major voice for the public safety community, already has advocated that additional spectrum should be allocated for public safety use. Indeed, the NPRM cites to APCO's Comments to the Second Notice of Proposed Rulemaking of the General Wireless Communications Service ("GWCS") proceeding,<sup>3</sup> wherein APCO recommended that a portion of the 4.6 GHz band be allocated for public safety mobile and aeronautical video operations.<sup>4</sup> APCO thus objects to the Commission's decision not to designate even a portion of the 4.9 GHz spectrum for public safety use.

I. The FCC Should Allocate a Portion of the 4.9 GHz Band for Public Safety Use.

Section 1 of the Communications Act of 1934 requires that the Commission regulate wire and radio communications ". . . for the purpose of promoting safety of life and property through the use of wire and radio communication. . .".<sup>5</sup> The Commission is statutorily obligated to ensure that radio communications support essential public safety functions provided by APCO's

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2. NPRM at ¶¶ 2 and 19.

3. *In the Matter of Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use*, ET Docket No. 94-32, Second Notice of Proposed Rulemaking, 10 FCC Rcd. 4769 (1995).

4. NPRM at ¶ 25.

5. 47 U.S.C. § 1 (1934). *See also*, 47 U.S.C. § 332(a).

membership. Indeed, the Commission has often recognized the goal and need for additional spectrum allocation for public safety use:

“Over the past decade, police, fire, emergency medical, and other public safety providers have been confronted by a number of problems that threaten their ability to fulfill their mission of protecting the public. Frequencies have become congested in many areas. Interoperability (the ability of different agencies to communicate across jurisdictions and with each other) has been difficult because of multiple frequency bands and incompatible equipment. In addition, public safety agencies have been hampered in their attempts to upgrade their equipment to take advantage of new technologies by the lack of funds for equipment. These problems must be solved quickly, if the public safety community is to meet the changing demands of the 21st century.

We believe that the Nation’s public safety agencies need additional spectrum to meet their immediate and future needs. . . .”<sup>6</sup>

Continued spectrum planning for “mission critical communications” is essential for the public safety community, and APCO agrees with the Commission that additional allocation of spectrum is necessary to meet the needs of the public safety community.

In the GWCS proceeding, the Commission had rejected APCO’s request that a portion of the 4660-4685 MHz band be allocated for public safety purposes. The Commission’s rationale, reiterated in the NPRM, was that “the Commission and the National Telecommunications and Information Administration (NTIA) had recently formed the Public Safety Wireless Advisory Committee (“PSWAC”) to prepare a report on operational, technical, and spectrum requirements of Federal, State, and local public safety entities through the year 2010.”<sup>7</sup> Subsequently, the PSWAC recommended to the FCC and NTIA that a total of 97.5 MHz is necessary for public

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6. *In the Matter of the Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010*, WT Docket No. 96-86, Second Notice of Proposed Rulemaking, 12 FCC Rcd 17706 (1997).

7. *Id.*

safety services by the year 2010, and identified the 4635-4685 MHz band as one of several bands for possible reallocation.<sup>8</sup> In 1998, the Commission (responding to a Congressional directive) addressed one aspect of the PSWAC report by allocating a total of 24 MHz in the 764-776/794-806 MHz band for public safety radio services.<sup>9</sup>

Now, the Commission states in the NPRM that “because of this recent public safety allocation” (*i.e.*, the 24 MHz), it does “not propose designating the 4.9 GHz band, or any portion of the band, for public safety use.”<sup>10</sup> The 24 MHz allocation, according to the Commission, “constitutes a significant commitment of spectrum to serve public safety needs into the next century, making it unnecessary to set aside spectrum in the 4.9 GHz band for public safety use.”<sup>11</sup> The Commission is correct that the 24 MHz is a “significant commitment of spectrum,” and that allocation is greatly appreciated by the public safety community; but to suggest that no further allocations for public safety are necessary flies in the face of the findings of the PSWAC.

After an exhaustive analysis that culminated in a nearly 800-page report, PSWAC made the following spectrum allocation recommendations in September 1996: (a) 2.5 MHz to be allocated immediately for interoperability from new and existing allocations; (b) 25 MHz within five years of the Final Report for new public safety allocations and applications (with the 746-806 MHz band targeted as a likely source); and (c) as much as 70 MHz of additional spectrum by

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8. PSWAC Final Report, September 11, 1996, at p. 22.

9. *In the Matter of Reallocation of Television Channels 60-69, the 746-806 MHz Band*, et Docket No. 97-157, Report and Order, 12 FCC Rcd. 22953 (1998).

10. NPRM at ¶ 26.

11. *Id.*

the year 2010 for mobile communications, including new applications and technologies for the public safety community.<sup>12</sup> The allocation of 24 MHz cited by the Commission in the NPRM thus represents just a portion of the 97.5 MHz of spectrum requirements identified by PSWAC, and is certainly not enough spectrum to carry the public safety community into the next century. The Commission must not summarily exclude the public safety community from allocation in the 4.9 GHz band simply because 24 MHz has already been allocated for public safety use. The spectrum requirements recommended by the PSWAC make it clear that the Commission has yet to meet the minimal requirements for future growth of public safety systems. Allocation of spectrum in the 4.9 GHz band for public safety will help satisfy some of the spectrum allocation need for the public safety community.<sup>13</sup>

The Commission's heavy reliance on the 24 MHz allocation at 764-776/794-806 MHz also overlooks the unfortunate fact that in some major metropolitan areas (including New York and Los Angeles) much of that spectrum will be unavailable for public safety use until at least 2006, and perhaps indefinitely. In certain geographic areas, access to some or all of the 24 MHz is blocked by incumbent television stations on channels 63, 64, 68, and 69, and to some extent by adjacent channel television stations on channels 62, 65, and 67. Pursuant to provisions in the Balanced Budget Act of 1997, these television stations are supposed to vacate the 746-806 MHz

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12. PSWAC Final Report at 3. *See also* PSWAC Final Report, Volume II, Appendix D, Spectrum Requirement Subcommittee, at 601-645.

13. The PSWAC identified the 4.6 GHz band as suitable spectrum to accommodate public safety growth. Since this spectrum has been reclaimed by the Federal Government and substituted with the 4.9 GHz band, APCO asserts that the PSWAC would consent to identifying this substitute spectrum for public safety operations.

band by December 31, 2006.<sup>14</sup> However, the Budget Act of 1997 also provides that this period may be extended indefinitely if specified levels of digital television market penetration have not been met.<sup>15</sup> There is a very real possibility that these thresholds will remain unmet well past 2006, leaving analog television broadcasters in the 700 MHz band indefinitely, and blocking nationwide public safety use of all 24 MHz.

## II. The 4.9 GHz Band is Suitable for Future Public Safety Applications.

As indicated above, more spectrum is needed for future growth and applications for public safety communications. Like the business community, the public safety community is excited about the prospect of new technologies and applications currently in the research and development stages that will upgrade public safety communications to the next generation. APCO recognizes that in some instances, public safety agencies will be able to utilize commercial services to access some of these technologies. However, the spectrum requirements identified by PSWAC are for “mission critical” activities that PSWAC concluded must be provided by public safety agency-owned and controlled operations.<sup>16</sup> Commercial services generally do not provide immediate priority access, ubiquitous coverage, flawless reliability, or security features which are essential for such “mission critical” public safety communications.

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14. Pub. L. No. 105-33, 111 Stat. 251 § 3004 (1997) (“Budget Act of 1997”).

15. These conditions include whether one or more of the television stations licensed to or affiliated with the four largest national television networks in that market are not broadcasting a digital television service signal; or if digital-to-analog converter technology is not generally available in the market; or if at least 15% or more of the television households in a given market do not subscribe to a multichannel video programming distributor that carries one or more of the digital television service programming channels.

16. PSWAC Final Report at 47.

The new applications for which public safety spectrum is required will include: intranet access and data inquiry used for logistics and intelligence by police, sheriff and other law enforcement officials; video projection in still, partial or full motion for police pursuit or EMT imaging of injuries while in route to trauma centers; use of broadband data for use of remote controlled robotics to defuse explosives; wireless (wide and local) area data networks; and personal area networks for in-vehicle laptops or hand-held devices. These new applications require more bandwidth than what is available in the 700 MHz band. Even in 1996, PSWAC estimated that of the approximately 95 MHz required for public safety communications, 41 MHz will be needed for wide band data and 51 MHz will be needed for video.<sup>17</sup>

The 4.9 GHz band is better suited than the 700 MHz band for many of the advanced public safety applications described above for two significant reasons. First, the 50 MHz of available spectrum at 4.9 GHz is better equipped to accommodate high speed, broadband transmissions. Second, the propagation characteristics of the 4.9 GHz is more suitable for short distance transmissions. The 700 MHz band, in contrast, is better suited for wide-area mobile communications that utilize relatively narrowband transmissions. In light of the propagation characteristics for the 700 MHz band, attempting to use this band for high speed broadband data transmission over short distances would be highly inefficient, and would leave public safety with inadequate spectrum to meet more immediate voice and narrowband data requirements.

Finally, as mentioned above, the 4.9 GHz band is not as encumbered by large numbers of incumbent licensees who potentially could remain in the band for an indefinite period, like those broadcast licensees operating in the 700 MHz band. It appears that the 4.9 GHz band can be

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17. PSWAC Final Report, Volume II, Appendix D, Table 1 at 609.

more easily utilized due to the Federal Government's self-imposed relocation and retuning.<sup>18</sup> As a result, the 4.9 GHz is more attractive and preferable for these future broadband public safety uses.

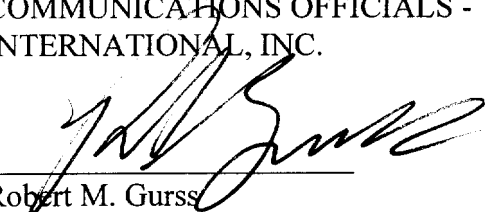
CONCLUSION

THEREFORE, for the reasons discussed above, APCO respectfully requests that the Commission allocate at least a portion of the 4.9 GHz band for public safety use.

Respectfully submitted,

ASSOCIATION OF PUBLIC SAFETY  
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18. NPRM at ¶ 20.